UAM-LAEFF-IAA Workshop on
INFRARED SPACE INTERFEROMETRY WORKSHOP

Astrophysics & The Study of Earth-like Planets

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Toledo, Spain

Abstract Form

Type of communication: Poster: _____

Oral preferred _____ x _____

Title: Space Interferometry Mission/Orbital Space Interferometry

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Abstract

The Space Interferometry Mission (SIM) is to be NASA's first scientific stellar interferometer in space. The current plan is for SIM to be the astrophysics mission that would follow SIRTF. SIM is based on the optical architecture of 0S1 (Orbiting Stellar Interferometer). The design however has been modified in several significant ways to 1) reduce the cost, 2) provide a significant imaging capability with baselines to ~20 meters 3) using a smaller launch vehicle (Delta vs. Atlas) while 4) maintaining the wide angle astrometric capability of the AIM mission recommended by the Bach all Report. The SIM project is entering a phase of aggressive technology development this fiscal year. A potential major cost driver for any space interferometry mission are the critical optical (electro-optic/opto-mechanical) components that maintain 10's nanometer path length stability. We hope to in ~1.5 years design, built, and test all the interferometry components for space (thermal-vat, vibration, radiation etc.). Concurrently, we are starting the design of an engineering model of SIM (fully function interferometer) to test the very complex control software and systems integration issues. Last of all we are starting the design of a breadboard of the micro arcsecond/picometer systems for ground verification of the ability of the instrument to do microarcsec level astrometry.

Please return the completed Abstract form before January 31, 1996 to:

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